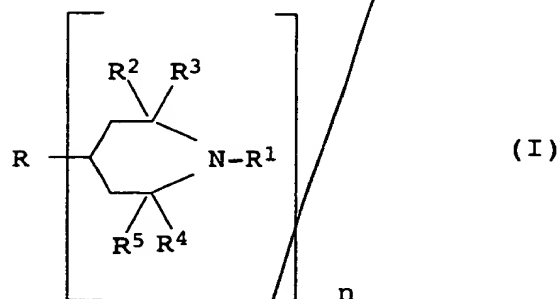


We claim:

1. A process for preparing polyamides, which comprises polymerizing starting monomers or starting oligomers in the presence of at least one compound of the formula (I)



R is a C<sub>1</sub>-C<sub>20</sub> aliphatic saturated hydrocarbon R<sup>8</sup> which bears 1-4 identical or different amide-forming groups R<sup>7</sup>,

R<sup>1</sup> is H, C<sub>1</sub>-C<sub>20</sub>-alkyl, cycloalkyl, benzyl or OR<sup>6</sup>, where

R<sup>7</sup> is selected from the group consisting of -(NHR<sup>9</sup>), carboxyl and carboxylic acid derivatives, R<sup>9</sup> being H, alkyl having from 1 to 8 carbon atoms, cycloalkyl having from 3 to 10 carbon atoms or alkylene having from 2 to 20 carbon atoms,

R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> are independently C<sub>1</sub>-C<sub>10</sub>-alkyl,

n is a natural number greater than 1,

the piperidine derivatives attached to R being identical or different with regard to the substituents, meaning R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup>,

wherein the compound of the formula I is added to the starting monomers or to the polymerizing reaction mixture and becomes attached to the polyamide through reaction of at least one of the amide-forming groups R<sup>7</sup>.

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2. A process as claimed in claim 1, wherein the piperidine derivatives attached to R are identical with regard to the substituents, meaning R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup>.
- 5 3. A process as claimed in claim 1 ~~or 2~~, wherein R<sup>1</sup> is H.
4. A process as claimed in ~~any of claims 1 to 3~~, wherein the R<sup>2</sup>, R<sup>3</sup>, R<sup>4</sup> and R<sup>5</sup> substituents on any one piperidine derivative are identical.
- 10 5. A process as claimed in ~~any of claims 1 to 4~~, wherein R<sup>2</sup> on any one piperidine derivative is methyl.
6. A process as claimed in ~~any of claims 1 to 5~~, wherein n is 2.
- 15 7. A process as claimed in ~~any of claims 1 to 6~~, wherein R is a group of the formula - NH - R<sup>8</sup> - NH - where R<sup>8</sup> is alkylene having from 1 to 20 carbon atoms.
- 20 8. A process as claimed in ~~any of claims 1 to 2~~, wherein R is - NH - CH<sub>2</sub> - CH<sub>2</sub> - CH<sub>2</sub> - CH<sub>2</sub> - CH<sub>2</sub> - CH<sub>2</sub> - NH - .
9. A process as claimed in ~~any of claims 1 to 8~~, wherein the polymerizing is carried out in the presence of at least one pigment.
- 25 10. The use of a compound (I) as set forth in ~~any of claims 1 to 9~~ for preparing polyamides.
- 30 11. A polyamide obtainable by a process as claimed in ~~any of claims 1 to 9~~.
12. The use of a polyamide as claimed in claim 11 for preparing filaments, fibers, films, sheetlike structures and moldings.
- 35 13. Filaments, fibers, films, sheetlike structures and moldings comprising a polyamide as claimed in claim 11.

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